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Juices to Drink

In jars or bottles. For canning tomato juice and fruit juices, use glass jars. Or use bottles, if you have them, with crown caps with brown shiny paper facing, and seal with a capping device.

Boil bottles to sterilize them. Dip the caps in boiling water just before applying. Prepare jars and tops as for canning.

Tomato juice. Choose fully ripe, firm tomatoes. Prepare according to canning-table directions. Fill bottles or jars, leaving one-fourth inch head space. Seal bottles tight; adjust jar caps.

Fruit juices. Choose sound, well ripened fruits and follow the canning-table directions. Handle small batches, so you can work quickly. Sugar helps hold color and flavor, but you can do without.

A thermometer is a help in heating fruit and juice just right.

Store canned juice in a cool place away from light.

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HOW TO CAN FRUITS AND VEGETABLES AT HOME

Have Food Ready

Pack when fresh. Choose fresh, firm, ripe fruits—young, tender vegetables. Can them quickly. "Two hours from garden to can" is a good rule. Another good rule is to prepare at one time only one canner load.

If you must hold fruits or vegetables, keep them cool and well ventilated. If you buy food to put up, try to get local produce.

Sort with care. Sort for size and ripeness. The same size will cook more evenly. Keep a sharp eye for spots—a bit of decay may spoil a whole batch. If you plan to extract fruit juice as a canning liquid, put aside some soft but sound fruit.

Wash very clean. With clean drinking water, wash every trace of soil off fruits or vegetables. Wash small lots at a time. Don't let them soak. Lift them out of the water to prevent draining dirt back on them. Handle gently—don't bruise.

To keep apples, peaches, and pears from turning dark after paring, dip in a solution of 2 tablespoons of salt and 2 tablespoons of vinegar to 1 gallon of water.

Jars, Caps, Rubbers Hot

Have ready. Place jars, caps, and rubber rings (but no metal closures with rubber attached) in a pan of warm water, with a rack or cloth in the bottom, so the jars won't bump. Bring them to boiling shortly before time to fill the jars, so all the equipment will be hot when needed.

Closures with rubber "made on" must be quickly dipped into boiling water just before they are to be used. Put wartime rubber rings on jars or on lids with care. Do this just before filling the jars and with least possible stretching.

The Hot Pack Is Best

Good reasons. Heating (precooking) vegetables or fruits, then packing hot, speeds along the processing. Precooking also shrinks the food, helps you to get more into jars. Have ready enough hot liquid to cover the food. Liquid helps to keep the fruits or vegetables from turning dark.

Precooking vegetables. Add boiling water to the vegetables, cover, and bring back quickly to boiling. Follow directions in canning table for each vegetable. Use the cooking water as covering liquid unless canning table says otherwise.

Precooking fruits. Heat fruit one of these ways: In fruit juice—in sirup—in water. Some fruits yield enough juice of their own when heated without added liquid. Adding sugar before heating the fruit will help draw out juice. The canning table gives added information on preparing each kind of fruit.

To extract juice. Crush and heat soft, juicy fruit to boiling. Strain and sweeten if desired.

To make sirup. Mix sugar and water or sugar and juice in the following proportions:

Sirup	Sugar (Cups)	Water or Juice (Cups)
Thin	1	3
Moderately thin	1	2
Medium (for sour fruit)	1	1

In step with sugar rations. The usual wartime canning rule is to allow 1 pound of sugar to 4 quarts of finished fruit. One way to keep in step is to use thin or moderately thin sirup. As a rule it takes three-fourths to 1 cup of liquid to each quart jar.

Use honey, if you wish, to replace as much as one-half the sugar called for in canning; or use corn sirup to replace as much as one-third. Do not use brown sugar.

A little sugar helps canned fruits hold color and flavor, but the sugar isn't essential to keep the fruit from spoiling. If you have more fruit than sugar, put up some fruit unsweetened, and sweeten to taste when you serve.

Fill Jars Quickly—Caps on Right

Hot food into hot jar. Pack briskly while the food is hot and cover with the boiling liquid. Pack well but don't cram in too much solid food. You need a fair proportion of liquid to solid for proper processing. Work out air bubbles with a knife blade.

Leave head space for the food to expand, as the canning table directs. Wipe the rubber or sealing edge clean—a seed or sticky bit may prevent a perfect seal.

Adjust the cap. Before processing, completely seal a jar closure that has rubber compound made on a metal disk.

Partly seal other screw types before processing—screw the cap tight, then turn it back one-fourth inch. Snap the top wire clamp of a lightning-type jar into place and leave the side clamp up.

Into the Canner

If using a boiling water bath. You can fix a boiling water bath canner from a wash boiler or deep kettle if you haven't a canner ready-made. Any clean vessel will do, provided it has a good lid and is big enough to hold a convenient number of jars and deep enough to allow covering tops of jars with at least 1 or 2 inches of water. Fit a wood or wire rack into the canner to hold the jars off the bottom. Water must move freely around and under them.

Have water boiling in the canner. Put in each jar of hot food as soon as filled. Add boiling water if needed to cover jar tops. Put lid on the canner.

Start counting time as soon as the water boils briskly, and keep it steadily boiling for as long as the timetable says for the food you are processing. If necessary, add boiling water to keep the jars covered.

If using a steam pressure canner. Here are special pointers:

Keep about an inch of boiling water in canner.

Place jars on rack. Don't let them touch. Steam must circulate all around each jar.

Fasten the cover securely, so that no steam escapes except at the open pet cock. Watch until steam pours steadily from pet cock, then let this continue for 7 minutes. Close the pet cock and let pressure rise to desired point on gage.

Count time from the moment the desired pressure is reached. Regulate the heat to keep the pressure even throughout processing. Never try to lower pressure by opening the pet cock. Keep drafts from blowing on the canner.

Let the hot canner cool gradually before opening. When the gage falls to zero, slowly open the pet cock. Then unfasten the cover—tilt the far side of cover, so steam will escape away from you.

Out of the Canner

Removing jars. If you have no jar lifter or tongs, dip out some of the water from a water bath canner before removing jars. Take out jars one at a time and tighten at once any caps only partly sealed. Be sure to push down the side clamp of a lightning-type jar. Leave alone caps that were completely sealed.

Lost liquid is lost. Don't open a jar to replace lost liquid, seal "as is."

Cool in the air. Place jars right side up to cool. Never set them on a cold surface. Keep them out of a draft but don't cover with a cloth.

Off with screw bands. When jars have cooled overnight, remove screw bands or caps that have a glass or metal disk underneath. You can use these bands or caps another day. If any band or cap sticks let it stay on, lest forcing break the seal.

Test for leaks. Carefully tilt a cooled jar to see if it leaks.

Second try. If a jar leaks, open it and heat the contents; process again in another jar with a new closure.

If any rubber ring pushes out badly after jars are processed, heat and process all over, using a new ring from a different lot. Discard the poor rubber.

Label and Store

Write plainly. Wipe the jars shining clean, and label each with the contents and date. If you can more than one lot in a day, add a lot number, so jars of any lot in which spoilage occurs can be traced. A gummed label or pencil that writes on glass is convenient.

Watch. Keep an eye on the jars, especially the first few days. If any show signs of leakage, examine that lot closely. Reprocess the food before it spoils.

Store the good jars. Canned food keeps best where it is dark, cool, and dry. Freezing does not spoil canned food unless it cracks the jar, breaks the seal, and lets bacteria in.

On Guard Against Spoilage

Heed signs. Before opening a jar, inspect it. A bulging lid or rubber ring, gas bubbles, leakage—these may be signs of spoiled food. When you open a jar look for other signs—spurting liquid, an "off" odor.

Corn, peas, snap beans, and tomatoes are subject to "flat-sour" spoilage when not properly processed or properly cooled after processing. Or if stored in too warm a place, jars of food may spoil.

Safety first. Never taste any canned food you suspect. Discard it.

Burn any vegetables that show signs of spoilage. Before using the jars and caps for any purpose, clean them well and soak or boil them in hot soapy water.

Take Stock of Equipment

Jars and caps. A large quantity of glass jars are being manufactured for home canning. But it is important that jars from other sources round out the supply. Old, but sound, jars of the kinds made for home canning are stored in homes. And many glass jars in which commercial food products are packed are reusable.

A reusable commercial jar has an opening 2⅝ inches in diameter, or 2$^{5}/_{16}$ inches. The larger opening is that of a standard-size Mason jar. The smaller size is a "63." The jar takes a metal cap that screws down over a glass thread.

Many commercial jars in which fruits and vegetables are packed cannot be reused for canning because they are vacuum-sealed. Manufacturers cannot adjust machinery to use screw caps.

When you save a commercial jar, save the original metal cap, to use in sealing. You can buy a screw band, if needed, to replace the cap of a jar with standard Mason size opening and deep thread.

For other commercial jars you must have the original cap or find one like it—you can't buy substitutes.

Look over your glass jars and caps carefully. Discard any with cracks, chips, dents—any defect which would prevent an airtight seal. Be sure porcelain-lined metal caps have not spread or bent at edges.

All jar openings are standard Mason size, except (f) which is 2$^{5}/_{16}$ inches ("63" size).

(a) Porcelain-lined zinc cap, or metal cap with white lacquer lining. Fits jar with shoulder.

(b) Three-piece cap—metal screw band, glass disk, top seal rubber. Fits deep-thread jar with or without shoulder.

(c) Two-piece cap—metal screw band a little shallower than type *(b)* and metal disk with made-on rubber. Fits jar with deep thread, with or without shoulder.

(d) Screw cap, metal disk with made-on rubber. Fits shallow-thread jar. Similar cap with deeper screw fits deep-thread jar.

(e) Glass cap, shoulder rubber. Fits lightning-type jar.

(f) Metal screw cap and metal disk with made-on rubber.

A Mason screw cap is handy to test jar types. If the cap fits, and your jar has a shoulder (ledge wide enough to support a shoulder rubber ring), use type *(a)*, *(b)*, *(c)*, or *(d)* deep-thread style as pictured. If the cap fits, and jar has no shoulder, use types *(b)*, *(c)*, or *(d)* deep-thread style. If the cap won't screw down, your jar may have a shallow thread and you can use type *(d)* shallow style.

If the Mason cap is too big, your jar may have a "63" opening. Measure it or try a size "63" cap. Use type *(f)*.

Rubber rings. Some jars seal with the aid of a separate rubber ring. Some use instead a metal disk with rubber compound made on. If a separate rubber is called for, get the right size—a "top seal" rubber that fits on the lid and belongs between jar rim and lid and is smaller than the familiar "shoulder" rubber that fits on a jar shoulder.

Rubber must help to seal the jar airtight, so use new, clean rings. Wartime rings are mostly made from reclaimed rubber, so don't give them a stretching test. The best test is to can a few jars of hot water, and if rings fail, discard the lot.

Cleaning all jars, caps, rings. Use fresh, hot soapy water to wash all jars, caps, and rubbers. Be sure to clean out every bit of old paper liner or sealing compound before reusing a commercial cap. Cut or pry out paper liner—boil a cap containing sealing compound, then scrape.

CANNING TABLES

Fruits, Tomatoes

Be sure solid food is covered by liquid—leave one-half inch head space in each jar.

Processing times are given for sea level. If you are at a higher altitude, add 1 minute for each 1,000 feet when processing time is 20 minutes or less. Add 2 minutes for each 1,000 feet when processing time is longer.

KIND OF FOOD	HOW TO PREPARE	Time to process in boiling water bath at 212° F.	
		Pints	Quarts
		Minutes	*Minutes*
Apples	Pare, core, cut into pieces. Steam or boil in thin sirup or water 5 minutes. Pack hot; cover with hot liquid.	15	15
	Or make *applesauce*, sweetened or unsweetened. Pack hot	10	10
Apricots	Same as peaches.		
Beets, pickled	Cook beets until tender in water to cover. Remove skins; slice or dice. Pack hot; add one-half teaspoon salt to each pint. Cover with boiling vinegar sweetened to taste.	30	30
Berries (except strawberries).	If berries are firm, precook, adding just enough medium sirup or juice to prevent sticking to pan. Pack hot; cover with hot liquid.	15	15
	If berries are soft, fill jars with raw fruit; cover with boiling sirup or juice.	20	20
Cherries	Can cherries with or without pits. Follow directions for berries. For sour cherries use medium sirup; for sweet cherries use thin sirup.	15	15
Peaches	Remove skins and pits. Precook juicy fruit slowly until tender, adding one-fourth cup sugar to 1 pound of fruit to draw out juice. Precook less juicy fruit in thin to medium sirup. Pack hot; cover with boiling juice or sirup.	20	20
Pears	Peel, cut in halves, core. Otherwise same as peaches.		
Pimientos, ripe	Place in hot oven for 6 to 8 minutes. Dip into cold water. Remove skins, stems, and seed cores. Pack and add one-half teaspoon salt to each pint. Do not add liquid.	40	.....
Plums, prunes	Put up plums whole or in halves. Prick skin of each whole plum. Precook 3 to 5 minutes in juice, or thin to medium sirup to sweeten. Pack hot; cover with boiling juice or sirup.	15	15
Rhubarb	Cut into one-half inch lengths. Add one-half cup sugar to each quart rhubarb and let stand to draw out juice. Boil until tender. Pack hot; cover with hot juice.	10	10
Sauerkraut	Heat well-fermented sauerkraut to simmering—do not boil. Pack into jars; cover with hot sauerkraut juice. Leave one-fourth inch head space.	25	30
Strawberries	Stem berries and add one-half cup sugar to each quart of fruit. Bring slowly to boil. Remove from stove and let stand overnight. Bring quickly to boil. Pack hot; cover with hot juice.	15	15
Tomatoes	Scald and peel; remove stem end and bad spots. Quarter or leave whole. Heat to boiling. Pack hot and add 1 teaspoon salt to each quart.	10	10
Tomato juice	Remove stems and all green and bad spots. Cut into pieces. Simmer until softened. Put through a fine sieve. Add 1 teaspoon salt to each quart. Reheat at once just to boiling. Fill into hot jars immediately. Leave one-quarter inch head space.	15	15
Fruit juices	Berries, red cherries, currants, grapes, plums, or blends of these—remove any pits; crush the fruit. Heat gently to 170° F. (below simmering) until soft. Strain through a cloth bag. Add sugar if desired—about one-half to 1 cup sugar to 1 gallon of juice. Heat to 170° F. again; fill into hot jars or bottles. Leave one-eighth inch head space.	5	5
Fruit purees	Use any soft fruit. Put the cooked fruit through a fine sieve. Proceed as for fruit juices.	20	20

Vegetables

Add 1 teaspoon salt to each quart when packed—leave one-half inch head space for nonstarchy vegetables, 1 inch for starchy corn, peas, lima beans. Be sure solid food is covered by liquid.

Time and pressure are given for sea level. If you are at a higher altitude, use the time given but increase pressure one-half pound for each 1,000 feet.

KIND OF FOOD	HOW TO PREPARE	Time to process in pressure canner at 10 pounds (240° F.)	
		Pints	Quarts
		Minutes	*Minutes*
Asparagus	Cut into 1-inch lengths. Cover with boiling water, boil 2 or 3 minutes. Pack hot; cover with hot cooking liquid.	35	40
Beans	*Fresh lima.* Can only young, tender beans. Cover with boiling water; bring to boil. Pack hot; cover with hot cooking liquid.	45	55
	Snap. Cut into pieces. Cover with boiling water and boil 5 minutes. Pack hot; cover with hot cooking liquid.	30	40
	Green soybeans. Cover shelled beans with boiling water and boil 3 or 4 minutes. Pack hot; cover with fresh boiling water.	60	70
Beets	Before washing, trim off tops leaving taproot and 1 inch of stem. Boil until skins slip easily—baby beets take about 15 minutes; older beets, longer. Skin and trim. Slice older beets. Pack hot; cover with fresh boiling water.	40	45
	Pickled beets. See fruit and tomato canning table.		
Carrots	Slice and boil 5 minutes in water to cover. Pack hot; cover with hot cooking liquid.	40	45
Corn	*Whole-grain.* Cut corn from cob so as to get most of the kernel but not the husk. Add 1 teaspoon salt to each quart of corn and half as much boiling water as corn. Heat to boiling and pack hot. Add no more salt and no extra water.	65	75
Greens	Discard imperfect leaves and tough stems; wash out all dirt. Boil in small amount of water until wilted. Pack hot and not too solid. Cover with hot cooking liquid.	95	105
Okra	Can only tender pods. Cover with boiling water and bring back to boil. Pack hot; cover with hot cooking liquid.	35	40
	With tomatoes. Heat sliced okra and tomato sections to boiling. Pack hot. (Tomatoes will provide enough liquid.)	25	35
	With corn and tomatoes. Heat sliced okra, whole-grain corn, and tomato sections to boiling. Pack hot. The processing times given are for a mixture of 3 parts of tomato pulp to 1 part each of okra and corn.	75	95
Peas	*Green.* Cover with boiling water, boil about 5 minutes. Pack hot; cover with hot cooking liquid.	45	.....
	Black-eyed. Same as lima beans.		
Pimientos	See fruit and tomato canning table.		
Pumpkin	Peel and cut into 1-inch cubes. Add a little water and bring to boil. Pack hot; cover with hot cooking liquid.	85	105
Sauerkraut	See fruit and tomato canning table.		
Squash	*Summer.* Do not peel. Otherwise same as pumpkin.		
	Winter. Same as pumpkin.		
Sweetpotatoes	Boil or steam until skin slips easily. Skin; cut into pieces. Pack hot; cover with boiling water.	100	110
Vegetable-soup mixtures.	Use 2 or more of these: Tomato pulp, corn, lima beans, peas, okra, carrots, turnips, celery, onion. Cut vegetables into small pieces or cubes. Add water if needed. Heat mixture to boiling and pack hot; cover with hot cooking liquid. Season to taste.	60	70

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Every jar of garden-fresh fruits or vegetables you put up at home this year will do double duty. It will help your family to keep well fed next winter. And it will help the Nation by easing the load on transportation and commercial food supplies.

Your Goal: To fill jars with food value and flavor, and keep food safe and sound.

Right Method for Each Food

For fruits and tomatoes use a boiling water bath. These foods may be processed satisfactorily in water at boiling point (212° F.). Processing is the heating period in a canner to kill bacteria that would cause food to spoil.

For corn, peas, beans, and other common vegetables (except tomatoes) use a steam pressure canner. To process these foods safely in reasonable time takes heat of at least 240° F. Only by holding steam under pressure can you get the high temperatures needed for this job.

A limited number of pressure canners—the size to process seven quart jars at one time—are being manufactured and distributed by rationing.

There are not nearly enough steam pressure canners to go around. But if individuals and groups owning canners share them and keep them working at capacity, steam pressure canners will preserve millions of jars of food.

If you have no steam pressure canner, team with someone who has. Or go to a community food preservation center. Or if you would make extra good use of a canner, apply through your county farm rationing committee to buy one.

A word on other canning methods:

Oven canning has these disadvantages: Juice bubbles out or steams away; peaches and pears are likely to darken. You can do a more dependable job of canning fruit in a boiling water bath. For the vegetables that need high heat to kill bacteria, oven canning is not safe. Even though the oven goes to 250° F. or higher, food inside the glass jars stays at about the boiling point.

The so-called open-kettle method of canning fruits and tomatoes is risky. Bacteria may get in when food is transferred from kettle to jar.

If you cannot have the use of a pressure canner, consider other ways to preserve some foods: *Drying* corn, for example, and okra, and full-grown lima beans. *Brining* purple top fall turnips, snap beans, cabbage. *Pickling* green tomatoes, cucumbers. *Quick-freezing* foods, if you can get freezer-locker space. *Storing* squash, pumpkins, late celery cabbage, root vegetables—in cellar, mound, or pit.

Canning Arithmetic

The table below gives some idea of the amount of fruits or vegetables (as bought or picked) that canning takes. Weight per bushel may vary.

Apples	1 bu. (50 lb.) cans 17–20 qt.
Beans, lima	1 bu. (28 lb.) cans 6–8 qt.
Beans, snap	1 bu. (24 lb.) cans 16–20 qt.
Beets	1 bu. (60 lb.) cans 22–24 qt.
Berries	24-qt. crate cans 15–24 qt.
Carrots	1 bu. (50 lb.) cans 20–22 qt.
Cherries	1 bu. (56 lb.) cans 20–25 qt.
Corn	1 bu. (72 lb.) cans 8–9 qt. (whole-kernel).
Grapes	1 bu. (48 lb.) cans 16–20 qt.
Greens	1 bu. (12 lb.) cans 5–7 qt.
Peaches	1 bu. (50 lb.) cans 18–20 qt.
Pears	1 bu. (58 lb.) cans 20–24 qt.
Peas	1 bu. (32 lb.) cans 12–16 pt.
Plums	1 bu. (56 lb.) cans 24–30 qt.
Squash	1 bu. (40 lb.) cans 16–20 qt.
Strawberries	24-qt. crate cans 10–15 qt.
Sweetpotatoes	1 bu. (52 lb.) cans 16–20 qt.
Tomatoes	1 bu. (56 lb.) cans 15–20 qt.